

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled)

1 2. (previously presented) An optical transmission device comprising:
2 a current source for outputting a drive current;
3 a semiconductor laser for converting the drive current into a stimulated emission
4 light and outputting the same;
5 a drive circuit for converting a transmission data signal into a modulation control
6 signal and outputting the same,
7 an optical modulator for receiving said stimulated emission light and said
8 modulation control signal and producing and outputting transmission signal light by changing an
9 amount of transmission of said stimulated emission light according to said modulation control
10 signal; and
11 a shading element for receiving said transmission signal light and a shading
12 control signal, the shading element for interrupting the transmission of said transmission signal
13 light according to said shading control signal.

1 3. (previously presented) An optical transmission device according to claim 2,
2 further comprising:
3 a temperature detector for detecting a temperature of said semiconductor laser and
4 producing and outputting a temperature detection signal;
5 an optical wavelength setting circuit for setting and outputting an optical
6 wavelength setting signal;

7 an optical wavelength stabilization circuit for comparing said optical wavelength
8 setting signal with said temperature detection signal thereby generating and outputting an optical
9 wavelength control signal;

10 a shading judging circuit for determining a difference between said optical
11 wavelength setting signal and said temperature detection signal thereby generating and
12 outputting a shading judging signal; and

13 an operator for receiving a shading setting signal and said shading judging signal
14 thereby generating and outputting said shading control signal.

Claims 4-5 (canceled)

1 6. (original) An optical transmission device according to claim 2 wherein said
2 driving current of said current source is controlled by an optical strength control signal and said
3 optical transmission device further comprises:

4 a photo detector for detecting an optical strength from a part of said stimulated
5 emission light thereby generating and outputting an optical strength detection signal;

6 an optical strength setting circuit for producing and outputting an optical strength
7 setting signal; and

8 an optical strength stabilization circuit for comparing said optical strength setting
9 signal with said optical strength detection signal thereby generating and outputting said optical
10 strength control signal.

1 7. (original) An optical transmission device according to claim 3 wherein said
2 driving current of said current source is controlled by an optical strength control signal and said
3 optical transmission device further comprises:

4 a photo detector for detecting an optical strength from a part of said stimulated
5 emission light thereby generating and outputting an optical strength detection signal;

6 an optical strength setting circuit for producing and outputting an optical strength
7 setting signal; and

8 an optical strength stabilization circuit for comparing said optical strength setting
9 signal with said optical strength detection signal thereby generating and outputting said optical
10 strength control signal.

1 8. (previously presented) An optical transmission device according to claim 19
2 wherein said driving current of said current source is controlled by an optical strength control
3 signal and said optical transmission device further comprises:

4 a photo detector for detecting an optical strength from a part of said stimulated
5 emission light thereby generating and outputting an optical strength detection signal;

6 an optical strength setting circuit for producing and outputting an optical strength
7 setting signal; and

8 an optical strength stabilization circuit for comparing said optical strength setting
9 signal with said optical strength detection signal thereby generating and outputting said optical
10 strength control signal.

1 9. (currently amended) An optical transmission device according to claim 3
2 further comprising an external control interface circuit for receiving a control logic signal for
3 controlling an optical strength, an optical wavelength and ~~the a~~ light shading, ~~the an~~ optical
4 wavelength detection signal and ~~the an~~ optical strength detection signal and producing an optical
5 wavelength changing signal for controlling the optical wavelength setting signal, an optical
6 strength changing signal for controlling the optical strength setting signal and the shading ~~setting~~
7 control signal.

1 10. (currently amended) An optical transmission device according to claim 19
2 further comprising an external control interface circuit for receiving a control logic signal for
3 controlling an optical strength, an optical wavelength and ~~the a~~ light shading, ~~the an~~ optical
4 wavelength detection signal and ~~the an~~ optical strength detection signal and producing an optical
5 wavelength changing signal for controlling the optical wavelength setting signal, an optical

6 strength changing signal for controlling the optical strength setting signal and the shading ~~setting~~
7 control signal.

1 11. (currently amended) An optical transmission device according to claim 18
2 further comprising an external control interface circuit for receiving a control logic signal for
3 controlling an optical strength, an optical wavelength and ~~the a~~ light shading, ~~the an~~ optical
4 wavelength detection signal and ~~the an~~ optical strength detection signal and producing an optical
5 wavelength changing signal for controlling the optical wavelength setting signal, an optical
6 strength changing signal for controlling the optical strength setting signal and the shading ~~setting~~
7 control signal.

1 12. (currently amended) An optical transmission device according to claim 6
2 further comprising an external control interface circuit for receiving a control logic signal for
3 controlling an optical strength, an optical wavelength and ~~the a~~ light shading, ~~the an~~ optical
4 wavelength detection signal and ~~the an~~ optical strength detection signal and producing an optical
5 wavelength changing signal for controlling the optical wavelength setting signal, an optical
6 strength changing signal for controlling the optical strength setting signal and the shading ~~setting~~
7 control signal.

1 13. (currently amended) An optical transmission device according to claim 7
2 further comprising an external control interface circuit for receiving a control logic signal for
3 controlling an optical strength, an optical wavelength and ~~the a~~ light shading, ~~the an~~ optical
4 wavelength detection signal and ~~the an~~ optical strength detection signal and producing an optical
5 wavelength changing signal for controlling the optical wavelength setting signal, an optical
6 strength changing signal for controlling the optical strength setting signal and the shading ~~setting~~
7 control signal.

1 14. (currently amended) An optical transmission device according to claim 8
2 further comprising an external control interface circuit for receiving a control logic signal for
3 controlling an optical strength, an optical wavelength and ~~the a~~ light shading, ~~the an~~ optical

4 wavelength detection signal and ~~the~~an optical strength detection signal and producing an optical
5 wavelength changing signal for controlling the optical wavelength setting signal, an optical
6 strength changing signal for controlling the optical strength setting signal and the shading ~~setting~~
7 control signal.

1 15. (previously presented) An optical transmission system comprising a plurality
2 of optical transmission devices each for converting a transmission electrical signal into a
3 transmission light signal, a multiplexer for multiplexing a plurality of transmission light signals
4 having different wavelengths thereby generating and producing an optical wavelength division
5 multiplexing light signal, an optical demultiplexer for demultiplexing said optical wavelength
6 division multiplexing light signal into a plurality of receiving light signals having different
7 wavelengths, respectively, and a plurality of optical receivers for converting said receiving light
8 signals into receiving electrical signals, respectively, wherein said optical transmission device
9 comprises:

10 a current source for outputting a drive current;
11 a semiconductor laser for converting the drive current into a stimulated emission
12 light and outputting the same;

13 a drive circuit for converting a transmission data signal into a modulation control
14 signal and outputting the same;

15 an optical modulator for receiving said stimulated emission light and said
16 modulation control signal and producing and outputting transmission signal light by changing an
17 amount of transmission of said stimulated emission light according to said modulation control
18 signal; and

19 a shading element for receiving said transmission signal light and a shading
20 control signal for interrupting light emission and interrupting the transmission of said
21 transmission signal light according to said shading control signal.

1 16. (original) An optical transmission system according to claim 15, wherein
2 said optical transmission device further comprises:
3 a temperature detector for detecting a temperature of said semiconductor laser and
4 producing and outputting a temperature detection signal;
5 an optical wavelength setting circuit for setting and outputting an optical
6 wavelength setting signal;
7 an optical wavelength stabilization circuit for comparing said optical wavelength
8 setting signal with said temperature detection signal thereby generating and outputting an optical
9 wavelength control signal;
10 a shading judging circuit for judging a difference between said optical wavelength
11 setting signal and said temperature detection signal thereby generating and outputting a shading
12 judging signal; and
13 an operator for receiving a shading setting signal and said shading judging signal
14 thereby generating and outputting said shading control signal.

1 17. (original) An optical transmission system according to claim 16, wherein
2 said optical transmission device further comprises, in place of said temperature detector, a
3 monitor element for detecting an optical wavelength of a part of said stimulated emission light
4 thereby generating an optical wavelength detection signal and outputting the same to said optical
5 wavelength stabilization circuit and said shading judging circuit.

1 18. (currently amended) An optical transmission device comprising:
2 a current source for providing a drive current;
3 a semiconductor laser connected to receive the drive current and in response emit
4 stimulated emission light;
5 a drive circuit ~~for~~ connected to receive a transmission data signal ~~and a shading~~
6 ~~control signal~~ and in response to provide a control signal;

7 an optical modulator positioned to receive the stimulated emission light and
8 connected to receive the control signal and in response change transmission of the stimulated
9 emission light thereby generating a transmission light signal;
10 a photo detector for detecting the stimulated emission light and in response
11 providing an optical strength detection signal;
12 an optical strength setting circuit for producing and outputting an optical strength
13 setting signal; and
14 an optical strength stabilization circuit for comparing the optical strength setting
15 signal with the optical strength detection signal and thereby provide the optical strength control
16 setting signal.

1 19. (currently amended) An optical transmission device according to claim 2,
2 further comprising:
3 a monitor element for detecting an optical wavelength of a part of said stimulated
4 emission light thereby generating an optical wavelength detection signal and outputting the same
5 to ~~said~~ an optical wavelength stabilization circuit and ~~said~~ an shading judging circuit[.];
6 an optical wavelength setting circuit for setting and outputting an optical
7 wavelength setting signal;
8 ~~an~~ said optical wavelength stabilization circuit for comparing said optical
9 wavelength setting signal with said optical wavelength detection signal thereby generating and
10 outputting an optical wavelength control signal;
11 a said shading judging circuit for determining a difference between said optical
12 wavelength setting signal and said optical wavelength detection signal thereby generating and
13 outputting a shading judging signal; and
14 an operator for receiving a shading setting signal and said shading judging signal
15 thereby generating and outputting said shading control signal.